Title (en)

Electric machine with permanent magnets arrangement for reducing torque pulsation

Title (de)

Elektrische Maschine mit einer Anordnung der Permanentmagneten um das Pulsieren des Drehmoments zu reduzieren

Title (fr)

Machine électrique avec une disposition des aimants permanents pour réduire la pulsation de couple

Publication

EP 1363381 A1 20031119 (EN)

Application

EP 02021275 A 20020919

Priority

JP 2002140039 A 20020515

Abstract (en)

A permanent magnet rotating electric machine uses no skewing under a predetermined current and voltage condition to prevent torque from decreasing and to decrease pulsation torque to make the machine less vibrating and less noisy. The permanent magnet rotating electric machine includes a stator (20) with multi-phase stator windings and a rotor (30) with a plurality of permanent magnets (36) internally embedded in a rotor core. The core shape of the rotor is uniform in the depth (longitudinal) direction with no skewing in the arrangement of the permanent magnets (36). The permanent magnets (36A, 36B, and 36C) are symmetrical with respect to a radial axis, but irregular with respect to the axial direction, for each pole. A magnetic flux generated from the between-pole permanent magnets (36A and 36C) almost equals a magnetic flux generated from the pole-center permanent magnet (36B). <IMAGE>

IPC 1-7

H02K 1/27

IPC 8 full level

H02K 1/22 (2006.01); **H02K 1/27** (2006.01); **H02K 21/14** (2006.01); **H02K 29/03** (2006.01)

CPC (source: EP US)

H02K 1/276 (2013.01 - EP US); **H02K 1/2766** (2013.01 - EP US); **H02K 29/03** (2013.01 - EP US)

Citation (search report)

- [A] US 2002047434 A1 20020425 - KOHARAGI HARUO [JP], et al
- [XA] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 24 11 May 2001 (2001-05-11)

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DOCDB simple family (application)

EP 02021275 A 20020919; CN 02142542 A 20020920; CN 200610132186 A 20020920; DE 60231079 T 20020919; EP 08020893 A 20020919; JP 2002140039 A 20020515; US 24558902 A 20020918; US 29639805 A 20051208; US 74818007 A 20070514; US 98159604 A 20041105